



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,985	04/15/2004	Kazuhiro Hara	450100-4879.1	7539

7590 07/31/2007
FROMMER LAWRENCE & HAUG LLP
745 FIFTH AVENUE
NEW YORK, NY 10151

EXAMINER	
LAFORGIA, CHRISTIAN A	

ART UNIT	PAPER NUMBER
2131	

MAIL DATE	DELIVERY MODE
07/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/824,985

Applicant(s)

HARA, KAZUHIRO

Examiner

Christian La Forgia

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/309,412.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The Applicant's amendment of 24 April 2007 has been noted and made of record.
2. Claims 20-37 have been presented for examination.
3. Claims 1-19 have been cancelled as per Applicant's request.

Response to Arguments

4. Applicant's arguments, see page 8, filed 24 April 2007, with respect to the double patenting rejection of claims 20-37 have been fully considered and are persuasive. The amendments to claims 20-37, as well as amendments made in the co-pending application 09/309,412, have overcome the double patenting rejection causing it to have been withdrawn.
5. Applicant's arguments with respect to claims 20-37 have been considered but are moot in view of the new grounds of rejection.
6. See further rejections that follow.

Priority

7. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/309,412, filed on 10 May 1999. 8. The Applicant is required to submit a certified English translation of the foreign priority document to overcome any possible intervening references filed between 12 May 1998 and 10 May 1999.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 2131

10. Claims 20-26, 28-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,829,5679 to Seth-Smith et al., hereinafter Seth-Smith, in view of U.S. Patent No. 5,987,518 to Gotwald, hereinafter Gotwald, and in further view of U.S. Patent No. 5,524,116 to Kalmanek, Jr. et al., hereinafter Kalmanek.

11. As per claim 20, Seth-Smith discloses a data transmission controlling method for controlling transmission of data from data transmitting means to data receiving means over communication channels(see col. 3, lines 14-18, fig. 1 sheet 1) and for causing said data transmitting means to encrypt data and transmit the encrypted data to said data receiving means over said communication channels, said data transmission controlling method(see col. 3, lines 14-22, fig. 1 sheet 1). Seth-Smith does not disclose encapsulating the data to be transmitted in multiplexed fashion in accordance with a first protocol; encrypting at least one of data capsules resulting from the encapsulation; and encapsulating the encrypted data capsules in accordance with a second protocol. Gotwald discloses encapsulating the data to be transmitted in multiplexed fashion accordance with a first protocol (i.e, internet protocol), encapsulating the data capsules in accordance with a second protocol (i.e, mpeg)(see col. 2, lines 3-13, 17-19, col. 3, lines 56-61). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the encapsulation method of Gotwald with Seth-Smith's encryption method, because encapsulating data is a more efficient method of transmitting information over the network, that can be packaged using a lower level protocol such as mpeg of Gotwald and then the data can be sent over the network, the data sent over the network will be secure with Seth-Smith's method.

Art Unit: 2131

12. Seth-Smith and Gotwald do not disclose wherein the first protocol pads a portion of 0 to 63 bits with a corresponding "1" as a suffix to the data, thereby maintaining a predetermined data length.

13. Kalmanek teaches padding data for transmission in multiples of eight bytes, specifically zero to seven bytes (56 bits) of padding are added to the transmission frame (column 4, line 44 to column 5, line 2).

14. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the first protocol to pad a portion of the 0 to 63 bits with padding data, since Kalmanek states at column 4, lines 45-58 that padding assures that the data is a predetermined length, specifically multiples of the trailer, which make it easier to segment and therefore transmit.

15. Same motivation applies above. As per claim 21, Gotwald discloses wherein said encapsulating in accordance with said first protocol (see col. 2, lines 5-8, see fig on front of patent, #44) supplements a real data part including said data to be transmitted to said data receiving means with an additional information part associated with said real data part (see fig of front of patent #46).

16. Same motivation applies above. As per claim 22, Gotwald discloses wherein said additional information part includes destination address information identifying the data receiving means authorized to receive data included in said real data part (see col. 4, lines 28-38).

17. Same motivation applies above. As per claim 23, Gotwald discloses wherein said destination address information is an individual (see col. 3, lines 51-53).

18. As per claim 24, Seth-Smith discloses wherein said data transmitting means possesses session keys corresponding to said destination address information, said session keys being used by said data transmitting means to encrypt information and data and by said receiving means to decrypt the encrypted information and data received; and wherein said data transmitting means transmits in advance said session keys to the data receiving means authorized to receive the transmitted information and data in accordance with said destination address information (see col. 3, lines 14-22, col. 10, lines 38-42, col. 22, lines 9-36, 57-60).

19. As per claim 25, Seth-Smith discloses a data transmission controlling, wherein said session keys are updated at predetermined intervals (see col. 11, lines 66-67, col. 12, lines 1-8, col. 19, lines 33-37).

20. As per claim 26, Seth-Smith discloses wherein said session keys are transmitted over a communication channel permitting from said data transmitting means to said data receiving means or bidirectional communication therebetween (see col. 6, lines 49-67).

21. As per claim 28, Seth-Smith discloses wherein said additional information part provides a 48-bit space in which to accommodate said destination address information (see col. 7, lines 48-

Art Unit: 2131

66).

22. Same motivation as applies above. As per claim 29, Gotwald discloses wherein said encapsulating in accordance with the first protocol encapsulates the data to be transmitted to said data receiving means in accordance with the Internet protocol (see col. 2, lines 3-16).

23. As per claim 32, Seth-Smith discloses encrypting the data using an encryption key; supplementing the encrypted data with encryption key information about said encryption key; transmitting said encrypted data together with said encryption key information from said data transmitting means to said data receiving means(see col. 3, lines 23-27, col. 6, lines 30-64, col. 20, lines 22-34); and decrypting, encrypted data using one of a plurality of decryption keys which allow said data receiving means to decrypt said encrypted data and which are updated frequently, said one of the decryption keys being selected in accordance with said encryption key information attached to said encrypted data(see col. 11, lines 66-67, col. 12, lines 1-8, col. 19, lines 33-37).

24. Kalmanek teaches padding data for transmission in multiples of eight bytes, specifically zero to seven bytes (56 bits) of padding are added to the transmission frame (column 4, line 44 to column 5, line 2).

25. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the first protocol to pad a portion of the 0 to 63 bits with padding data, since Kalmanek states at column 4, lines 45-58 that padding assures that the data is a predetermined

Art Unit: 2131

length, specifically multiples of the trailer, which make it easier to segment and therefore transmit.

26. As per claim 33, Seth-Smith discloses wherein said plurality of decryption keys include a decryption key which is currently usable for decrypting said encrypted data received, and a decryption key, encrypted data received; and wherein said data decrypting step selects the currently usable decryption key based on said encryption key information(see col. 3, lines 23-27, col. 20, lines 22-34).

27. As per claim 34, Seth-Smith discloses wherein said encryption key and said decryption keys are session keys(i.e, service key) for encrypting information and data(see col. 3, lines 14-22, col. 10, lines 38-42, col. 22, lines 9-36, 57-60).

28. As per claim 35, Seth-Smith discloses wherein said session keys are updated at predetermined intervals(see col. 11, lines 66-67, col. 12, lines 1-8, col. 19, lines 33-37).

18. As per claims 30-31, 36-37, Seth-Smith discloses wherein said data receiving means is constituted as a bridge, Seth-Smith inherently discloses wherein the data receiving means is constituted as an IP router, and bridge, because Seth-Smith discloses a subscription television system that uses a satellite to transmit data(see abstract).

29. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seth-Smith et al. in view of Gotwald further in view of Kalmanek as applied above, and in further view of U.S.

Art Unit: 2131

Patent No. 5,602,917 to Mueller, hereinafter Mueller.

30. As per claim 27, Gotwald discloses wherein said encapsulating in accordance with said first protocol uniquely determines how said destination address information attached to said real data part is stored into said additional information part(see col. 2, lines 31-54). Seth-Smith-Gotwald combination does not disclose said encrypting step further encrypting said real data part using a master key specific to the data receiving means corresponding to said destination address information. Mueller discloses encrypting step further encrypting said real data part using a master key specific to the data receiving means corresponding to said destination address information (see col. 1, lines 46-61). It would have been obvious to one of ordinary skill in the art to combine the teachings of Mueller within the system of Seth-Smith, Gotwald combination, because encrypting the data using a master key offers a distinct advantage that the intercepted, encrypted messages based on the master key cannot be decrypted at a later time even if access to the actual encryption system is gained (see col. 2, lines 1-7 of Muller).

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

32. The following patents are cited to further show the state of the art with respect to adding padding information to transmission packets, such as:

United States Patent No. 6,098,188 to Kalmanek, Jr. et al., which is cited to show adding padding information to packets at column 4, lines 14-67.

United States Patent No. 6,522,651 B2 to Herrman, which is cited to show adding packet information to the end of packets at claim 1.

Art Unit: 2131

United States Patent Application Publication No. 2002/0003811 A1 to Herrman, which is cited to show adding packet information to the end of packets at claim 1.

United States Patent No. 6,226,771 B1 to Hilla et al., which is cited to show adding padding data to a frame so that it meets network requirements and can be transmitted on the network at column 7, lines 14-27.

United States Patent No. 6,781,991 B1 to Anderlind, which is cited to show including padding information in an encapsulated packet at column 7, lines 7-23.

33. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

34. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (571) 272-3792. The examiner can normally be reached on Monday thru Thursday 7-5.

Art Unit: 2131

36. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

37. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christian LaForgia
Patent Examiner
Art Unit 2131

clf

CHRISTOPHER REVAK
PRIMARY EXAMINER

